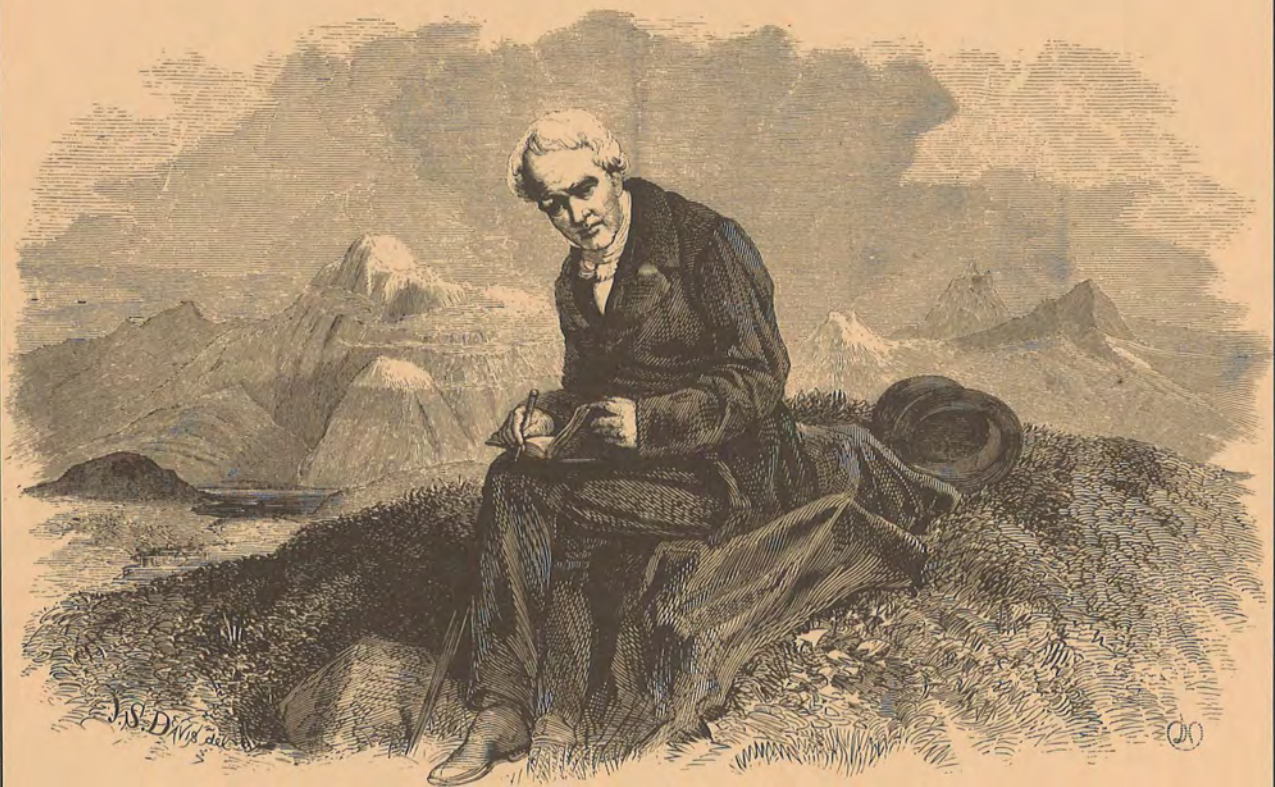


# HISTORY OF GEOGRAPHY N·E·W·S·L·E·T·T·E·R

The Association of American Geographers

Number Five

December 1986



ALEXANDER VON HUMBOLDT.

*(From the portrait by Schrader, in possession of Albert Havemeyer, Esq., New York.)*



In 1970 the A.A.G. Committee on Archives and Association History was established. Since that time the Committee has arranged numerous sessions and workshops concerning the history of geographic thought, facilitated the establishment of an official archival repository, supported Maynard Weston Dow's "Geographers on Film" project, advised on the U.S. bio-bibliography contribution to *Geographers*, and otherwise sought to foster and encourage study of geographical thought. The first number of the *History of Geography Newsletter* was published in December 1981.

The purpose of the *Newsletter* is to provide an outlet for articles, summaries, reports of events, reviews or notices of literature et al. relating to the history of geographic thought. If you have something of this genre which you feel would be appropriately placed in this publication, please submit same to the editors. It is anticipated that this *Newsletter* will be published occasionally, but nevertheless not infrequently.

Klaus D. Gurgel joins with me in producing this number of the *Newsletter*. Recognition for help received in typesetting the manuscripts for this *Newsletter* is extended to Ruth L. Gurgel of the Atlas Publishing Company.

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Cover: Alexander von Humboldt. (From Arnold Guyot's, *Physical Geography*, Ivison, Blakeman, Taylor, and Company, New York and Chicago, 1885, revised edition, p. 1.)

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## Carl Sauer and the Carl Ortwin Sauer Papers

By Martin S. Kenzer  
Louisiana State University\*

### A Brief Look at the Early Carl Sauer

CARL ORTWIN SAUER was born on Christmas Eve, 1889 in Warrenton, Missouri.<sup>1</sup> He attended grammar school in Warrenton but may have received some of his early schooling at the local orphan home where his mother often did volunteer handiwork. In 1898, young Sauer and his parents went to Calw, Württemberg, Germany, where they remained for approximately three years. Immediately upon the family's return to Warrenton, Carl was put into the preparatory program at Central Wesleyan College where his father taught music and French. The younger Sauer did remarkably well for his age and was subsequently enrolled in regular college courses at the incredibly young age of fourteen. He completed his studies at Central Wesleyan taking two baccalaureate degrees at the age of eighteen. He then left Warrenton and matriculated at Northwestern University with the prospect of taking a graduate degree in geology. A year at Northwestern, however, convinced Sauer that neither Northwestern nor geology would suit his career plans. The following year he enrolled at the University of Chicago as a Ph.D. candidate in the Department of Geography.

Chicago appealed to Sauer, but university, apparently, did not. Determined to establish himself in the publishing industry, he left the University of Chicago in 1911 and took a job with The Municipal Art League of Chicago where he hoped he would get the necessary experience to undertake publishing work. His objective of entering the publishing field persisted during the five months he worked for the Art League. He soon came to realize, however, that although the League afforded him an opportunity to establish contacts, it would never be a means to an end. An editorial position opened up at The Rand McNally Company and Sauer promptly took it, remaining with Rand McNally for nearly sixteen months. Unfortunately, his first job in a publishing house turned into a colossal disappointment. For despite the fact that Sauer was promised numerous promotions, and in spite of his belief that he was the most diligent person in the editorial room, he never received the promotion he had hoped for. Frustrated at great length, Sauer was

on the verge of resigning when he received word of a temporary teaching position at Salem Normal School in Salem, Massachusetts. With little hesitation he took hold of the opportunity and quit the Rand McNally firm.

The job at Salem was a blessing, for this would provide Sauer with sufficient income to get married. On December 30, 1913 he married Lorena Schowengerdt (1890-1975) and they immediately departed for New England. Carl and Lorena Sauer honeymooned in Salem, as there was no time to go anywhere else; Carl was committed to be there and teach. They found a room in a boarding house near campus and settled down for the next five and one-half months.

The position at Salem Normal was for only one semester,<sup>2</sup> but Carl and Lorena utilized their time in the East to the utmost. They took daily (and sometimes weekend) journeys throughout the area, and typically they would spend their afternoons (after Carl's classes) discovering a region that neither of them had ever seen before. Visits to Boston were frequent, where they both made use of the available library resources. When the semester ended, the Sauers left Salem and headed for Ann Arbor where Carl, now twenty-four, had procured a summer teaching job at the University of Michigan.

When the summer of 1914 came to a close, the Sauers moved to Chicago where they rented their first apartment. Carl had earlier decided to return to the University of Chicago and complete his doctorate, so he spent the next year and one-half collecting materials and working in earnest to write his thesis. Shortly before his graduation, an offer came from William H. Hobbs (1864-1953) to return to the University of Michigan as a permanent member of the faculty. The Department of Geology at Michigan was changing its name to the Department of Geology and Geography and they wanted Sauer, in essence, to be the geography component. Sauer accepted straightaway and arrived back in Ann Arbor in January of 1916.

In the seven and one-half years Sauer spent in Ann Arbor a great deal was accomplished: he helped to establish the

\* The paper was written while the author was affiliated with McMaster University, Canada.

Michigan Land Economic Survey (see Schmaltz 1978); he helped locate and create a permanent field camp site for the University in the state of Kentucky (see James 1983); he was elected to membership of the Association of American Geographers and read several important papers before that body; and, due to his scholarly efforts and popularity as an instructor, he was routinely promoted until he became a full professor in 1922. Yet, Sauer felt constrained by the Mid-western approach to geography - the predominant approach at the time (Rugg 1981) - and he definitely did not wish to continue with his applied research. More importantly, however, he began to appreciate a Germanic conception of the discipline, and he came to realize that professional geography could be more than the tedious mapping of alternating land uses.

In 1923 an attractive offer came from the University of California at Berkeley, and Sauer was drawn west to new horizons. California represented an opportunity to divorce himself from the Middle West and to put his emerging perspective of geography into practice. He arrived in Berkeley in August of that same year, as the new Chairman of the Department of Geography, and he remained with the Berkeley Department for the rest of his life.

### **The Sauer Papers**

The Carl Ortwin Sauer Papers are a record of Sauer's years at Berkeley, primarily in the form of correspondence. Unfortunately, the time span of the bulk of his letters is from the early-1930s until the early-1960s, shortly after he retired from the Department. There are the odd letters from the 1920s (and some even earlier) in the collection, and there are scattered pieces of correspondence into the 1970s, but these are the exception. As well, most of the correspondence is professional in nature, with only a small percentage devoted to personal letters. The latter are principally handwritten letters addressed to (and saved by) his former students and close associates, copies of which were sent (by request) to the Berkeley Department following Dr. Sauer's death in 1975.

The reasons why very few letters exist in the collection prior to the early-1930s are threefold - all somewhat speculative. Firstly, in the early years of Sauer's tenure at Berkeley, the Geography Department was not heavily funded and Sauer did the greatest percentage of the work himself (including his own letter writing), rarely keeping copies of his correspondence. Thus the bulk of the early letters have been lost unless the originals were saved by the recipients. Secondly, after having now read a lifetime's worth of letters written by Sauer, and having spoken with former colleagues, friends, and relatives, I am fairly con-

vinced that Carl Sauer had no sense of his own posterity and, consequently, made no effort to preserve his correspondence. What are extant, therefore, are carbons made by secretaries who virtually took it upon themselves to make copies of his outgoing mail. Finally, John Leighly has suggested (to me) that Sauer's early correspondence may have been lost when the Department moved to new quarters in the early-1930s.

Whatever the true reason(s) for the dearth of early materials, the Carl Ortwin Sauer Papers remain a rich and invaluable record of Sauer's changing attitude concerning geography and indeed all of the social sciences. Moreover, they may in fact represent one of the foremost repositories of twentieth-century geographic thought in America to date.

### **Organizing and Cataloging the Collection**

The Sauer Papers are part of the manuscript collection of The Bancroft Library of the University of California, Berkeley. For identification purposes, the collection has been cataloged by the Bancroft staff under call number 77/170 and there is a 100-page finding aid called "Temporary Key to the Carl Sauer Papers."

Unlike most manuscript collections at The Bancroft Library, the Sauer Papers were not arranged by the Library personnel and therefore are not organized like most Bancroft collections. The Papers were put together by Dr. Anne Macpherson (a former graduate of the Berkeley Geography Department), who did a first-rate job of assembling and giving order to such a diverse collection of Saueriana. It is for this reason that the collection's finding aid continues to carry the term "temporary." I have been told, however, that in all likelihood the Sauer Papers will probably remain "indefinitely" in the manner donated by the Berkeley Geography Department.

The collection itself is large, comprising twenty-one letter boxes of correspondence and seven larger cartons of notes, manuscript materials, old diaries and ledgers, photographs, departmental reports, newspaper clippings, and kindred effects. In all, there are approximately six thousand pieces of correspondence in the collection, a significant percentage coming from outside the discipline of geography. Letters are arranged by correspondent, not by date; organizational and institutional correspondence is arranged alphabetically.

The amount of correspondence to or from any single correspondent varies according to Sauer's relationship with that person and/or institution. Therefore, in many cases there is only one exchange of letters, while in other instances an individual folder (representing a single correspondent) may



be completely full or, in some cases, divided into several weighty bundles. The thickest folders usually represent exchanges between Sauer and his former graduate students, or between Sauer and long-time confidants such as Edgar Anderson, Paul Fejos, Isabel Kelley, Evelyn Pruitt, Richard J. Russell, C. Warren Thornthwaite, and Joseph Willits - most notably, non-geographers.

### The Sauer Papers as Insight into Sauer

The Sauer Papers reflect its namesake's breadth of mind and his lofty position within the social science community. Examining the collection, several things seem to call attention to themselves irrespective of one's initial purpose in perusing the Papers. There is the discovery: (a) that Sauer was incessantly critical of American geography, and that he increasingly saw the discipline in this country moving further and further away from its central position within the social sciences; (b) conversely, that Sauer was far more positive about European (but especially German) geography, and his own work and research must be seen as an attempt to somehow bridge the gap between American and European geography; and, (c) stemming from these first two facts is a recognition that Sauer viewed his own department as something distinctive alongside American geography departments - namely, his version of a European geography department on American soil. In the following paragraphs I will try to illustrate these three points with selected excerpts from the Sauer Papers.<sup>3</sup>

### Sauer as Critic of American Geography

The craving among American practitioners to establish an identity for American geography continually troubled Sauer. Ever since William Morris Davis's (1850-1934) tireless efforts to give the field some degree of scientific, independent status, American geographers have always gravitated toward a preoccupation with the definition of geography (Sauer 1925, p. 19). Consequently, as the interests and viewpoints of the practitioners changed through time, concomitant definitions changed accordingly (Leighly 1955). As a result, American geography has resembled Continental geography only slightly and this aggravated Sauer to no end. He decried his North American colleagues who had little or no respect for geography's traditional commitments. Moreover, he would use his correspondence to broadcast his opinions and ruminate about geography's failings in the New World. In a letter to Preston James (1899-1986) written in 1940, Sauer comments at length regarding his perspective on domestic geography:

I am in a sufficiently pessimistic mood about the situation of geography in this country. . . . Something serious is the matter with us, but I don't quite know

what. Somehow we've never caught on to anything that interested us enough really to settle down and work at it. . . . Since the old days of physiography, I think that the geographers have lacked foci of observation. It's been too long a period of arguing about what is geography and churning around in methodology. I still remember those dreadful seminars at [The University of] Chicago in which there was no curiosity about what a man found, but only discussions of relevance to a particular definition of geography, and comment on presentation. . . . My professional correspondence is with historians, anthropologists, and botanists, but hardly with geographers. . . . Aren't we American geographers all pretty much in a similar situation, that we really don't relie [sic] upon each other for intellectual contacts? (C.O. Sauer to P.E. James, March 16, 1940).

Three years later, in a letter to his friend and former student, Joe Spencer (1907-1984), Sauer augments his concerns over the course of American geography, in particular the lack of intellectual curiosity and the associated thrust toward applied geography in this country:

Good heavens, Joe! You are beginning to sound just like these other slick salesmen who call themselves geographers when you talk about "rounded, complete, comprehensive, effective geography." We are not here to peddle stuff and shift our wares with every change in the market demand. If we have got any reason for existence it is because we can apply a tenacious curiosity to intellectual discovery. These salesmen who are rushing around promoting themselves in the first place and in the second place the year's latest line labelled "Geography" have completely overbalanced us. American geography is not a craft; it is a jobbing center. I am about ready to declare an open season on salesmen and their sample cases (C.O. Sauer to J.E. Spencer, September 17, 1943).

Three months thence, again perturbed over the then-current trend of neophyte practitioners continually redirecting geography's focus to suit their own interests, rather than the discipline's inherent usefulness (as perceived by Sauer), he asserts:

I am not proud of the kind of popularity that [American] geography has been having. The momentary success of geography has been secured too cheaply, and there is almost certain to be a big crop of professional promoters of geography who have little but good resonance. I think there is a way of recognizing them; they never stay with one line of interest very long, but they are always the exponents of the latest geographic fashion. Right now these boys

are all political geographers. Several years ago they were land promoters; before that they were economic geographers. I am not saying that these are not fields of serious endeavor. I am only trying to say that a lifetime is hardly long enough to master one of them and that the people who crowd into the thing that is the latest vogue are not likely to be the people who have tenacious intellectual curiosity (C.O. Sauer to V.E. Monnett, December 14, 1943).

The same attitude is found time and time again in Sauer's correspondence. As the years passed, he seemed to grow more and more distraught and his deliberations on the shortcomings of American geography multiplied. In a letter to his long-time friend Joseph Willits of the Rockefeller Foundation, Sauer notes:

Your letter of the 8th involves the history of American geography. (The first pages of my 1940 address to the Association of American Geographers [Sauer 1941]. . . give an interpretation of some of the things that happened in the field.) It is fair to ask what the matter is with geography. My first answer would be that there has been very little the matter with it on the continent of Europe and lately in the British Isles, but it's in bad shape in this country. There you have a good part of the answer as to why my suggestions for [the employment of geographers at] McGill [University] were drawn from the British Empire, and not from the United States.

After discussing the first four generations of geographers in this country and then pinpointing their respective virtues and weaknesses, he resumes his critique of American geography:

To get back to the matter as to what is wrong with [American] geographers, I think that perhaps the principal answer is that it is mostly a field of teaching in this country rather than a field of inquiry and that hence it has been highly opportunistic in setting up courses that would draw sufficient enrollment; partly as the result of the first war and the jobs that geographers held in Washington. . . it tagged along as a service subject to economics. . . Those were the days when almost everybody became an economic geographer. Under the New Deal the boys became land planners. The present war has brought out a rash of geopoliticians. In the next period they may consider themselves as social engineers (C.O. Sauer to J.H. Willits, January 15, 1944).

Sauer's disdain for American geography - his fear that successive generations of geographers in America were wearing thinner and thinner intellectually - can be cited over and over again. This was a concern that lasted his entire

professional life and one could cull dozens of examples to emphasize the point (see Leighly 1979, p. 7). Instead, I shall simply let Sauer summarize his feelings in his own inimitable way. In a letter written to another former student around the time of his retirement, Sauer avows:

The growth of American geography has been more in number of practitioners than in amount, quality, and kind of knowledge. We know that. We have to face it: we've been in mass production for an expanding market for teachers and government employees; the Ph.D. is a pass-key to a job. To be excited about original learning appears to be somewhat of a professional handicap to the young geographer. Our first problem is to get better youngsters, the second to give them better training, the third to give them the opportunity to use their abilities according to the direction that their intellectual curiosity takes them. . . What has hurt us badly has been the notion that in some manner the geographer "synthesizes" the observations others have made, that what he uses is already in books and tables and that he is working adequately if he digests data which he gets only at second hand. Thus we have the sad situation of geographers who work in their offices through the years when their legs, heart, and eyes are good. To me the complete geographer is an eager and qualified field observer, who can have his eyes communicate with his brain so that relevant questions arise as to categories of phenomena. . . This is, I think, the reason why European geographers are better than we (C.O. Sauer to F.B. Kniffen, September 28, 1954).

### Sauer as Advocate of European Geography

Sauer's negative opinion of what he called his "cis-Atlantic colleagues" (C.O. Sauer to E.A. Ackerman, February 5, 1946) was in direct contrast with his praise for European geographers. He believed strongly in the Continental approach for three overriding reasons. Firstly, the Europeans were not preoccupied with the task of redefining their undertaking and continuously recharting their course as the Americans were. In Sauer's eyes, Europeans recognized that geography had roots stretching back to the classical Greeks, wherefore the Germans, and to a lesser extent the French and English too, were content to build on that traditional approach (see Fuson 1969, pp. 81-106). Thus, in 1937, he would declare:

The Germans have furnished the best geographers in the world, and they are based on the longest and largest tradition in this field. From the time of Alexander von Humboldt and Karl [sic] Ritter to the present the Germans have contributed more to geography than anyone else (C.O. Sauer to H.A. Moe, March 23, 1937).

Secondly (but directly related to the first reason), Continental geographers were committed to a "genetic" geography. Whereas American geographers have been seemingly content to practice a purely present-day form of geographical inquiry - a custom given sanction following the publication of Hartshorne's *Nature of Geography* (Hartshorne 1939) - Europeans have never engaged in a strictly static definition of the discipline. The element of *time* and the concept of *process* have never been foreign to European practitioners. Lastly, Sauer had no tolerance for "armchair geographers." He was adamant about fieldwork and he venerated the Europeans for their tenacious attitude toward field study. For Carl Sauer, *nothing* mattered more than fieldwork; and no other single issue annoyed him more than the ever increasing tendency among American geographers to rely on field observations only as a last resort. For Sauer, fieldwork was the starting point down any avenue of discovery - not the route of last hope because someone else had failed to collect your required data. When geography is defined in terms of man's impact upon the landscape, then field experience becomes a prerequisite for any study approached from a truly *geographical* point of view. As the years wore on, his patience for colleagues prone to armchair "synthesis" and "applied" research (as alternatives to first-hand contact with the land and people) grew ever so thin. For these three reasons alone, he would continually compare Old and New World attitudes toward geography.

Sauer would frequently use his correspondence to transmit his views on the differences between American and Continental geographers, particularly with regard to their respective training. In a letter to Donald C. McKay, Chairman of the Committee on International and Regional Studies at Harvard University, Sauer maintains that:

There is rather marked and significant contrast between European and American geography. Roughly, in European universities discovery of knowledge is basic; with us, communication and application. . . . Our selection of persons [in American universities] has not been concerned primarily with scholarly bent or aptitude. Our academic activities have done little to change us in such direction. We produce vigorous teachers and some capable organizers, but we are undeveloped as to scholarship. These comments are not directed against the substance of geography, but against its practice among us.

He continues his letter to McKay, indicating the importance of fieldwork as a factor in geographic research in Europe:

Traditionally, especially in Europe, the most important part of the training of a young geographer is in some job of field study. This habit of direct obser-

vation is continued and expanded in his mature years and stopped only by loss of physical ability. I know of very few significant workers who have not been eager and active field men. In fact, the most literate of our [American] geographers have been those who have used their field observations as a means of formulating questions that have carried them into comparative studies in the libraries. The fading out of this quality among our younger countrymen is especially and regrettably sensible. No geographer can really gain as much field experience as he should have, nor can he exhaust the documentation by other witnesses that has accumulated in the libraries. Yet, we in this country have lacked or have lost both the first hand discovery by observation in the field and the capacity to get back to actual source materials in the libraries (C.O. Sauer to D.C. McKay, December 21, 1949).

While many are familiar with Sauer's insistence on fieldwork (see West 1979), few perhaps realize the degree to which he eventually came to revere a field-oriented approach; fewer yet are likely to recognize that it was due, in large part, to an admiration for European practitioners that convinced him of that fact. Writing in 1954 he makes the point, leaving little room for misunderstanding:

As long as I am about[,] I must preach that our greatest need is to recruit, train, and support competent field observers. This is the greatest weakness in American geography and has always been such in contrast to our European colleagues. A good man may think well with the data that others have gathered, but we are most woefully weak in the ability and desire to make original observations. A generation ago we knew as much; I doubt that we do so today. . . . And don't think that some other discipline will provide the observational data that a geographer who knows nothing or little of them can "synthesize" and "interpret", sitting comfortably at his desk or over a drafting table (C.O. Sauer to F.B. Kniffen, et al., December 13, 1954).

What troubled Sauer as much as his belief that his colleagues were non-field oriented, was a fear that fieldwork, at some foreseeable time, could become yet another pre-packaged, "synthesized" technique. He was dismayed over the thought that the new breed of armchair geographers (being turned out in greater and greater numbers) would ultimately turn to pre-tested field techniques - techniques which, in theory, could be universally applied in any given situation. In doing so, the geographer would forever lose his basic analytical and observational skills. Synthesis was of course important to Sauer, but observation and analysis preceded any attempt to construct some overarching synthesis. It is in this vein that Sauer muses at length:



In a sense I am perhaps questioning the validity or usefulness of any general field technique. . . . The more time is spent making maps the less attention is likely to be left for thinking about why things are set down on the map. . . . [I]f one starts with a predetermined plan of map recording (which is usual, if not necessary) desirable alterations in the "legend" are discouraged, because then one might need to go back and redo what has been done, and the more one learns about an area the more may such revisions in systematic plan be indicated. The things that may be recorded in a regional survey are almost infinite, the significance of distributions grows for some and diminishes for others as one knows an area more intimately. A mapping plan is likely to freeze attention when it should be most elastic. As a result the mapping program is likely to come up with the areally most extensive things, which may not be the diagnostic items. . . . I'm not interested in a field technique; probably I'm against one as giving boys the notion that if they've got a technique they're ready to operate as field geographers, and are thereafter probably impenetrable [*sic*] to finding out anything. There is a geographic method, that of spatial distribution. It is important to be sensitive in the field to presence or absence and this awareness can be learned in considerable measure by attention. I doubt that it can be taught *per se*. You begin by being on the lookout for certain things with determinable distribution about which you've got a question that's bothering you. . . . But the question, or part of it comes first; one does not map the distribution of anything or everything. The beginning is I think with some curiosity as to presence or absence. In human geography this incidentally disposes immediately of the old "methodologic" argument about geographic and non-geographic "factors" or what-you-callems. The distribution is the thing to explain, not the "response."

He concludes his epistle by comparing American geography to German geography - particularly "the contributions of *Siedlungsgeographie*" - and ends on a typically pessimistic note:

You may see why I am regretful that so many of our American colleagues decided they were going to be synthesizers without knowing physical geography, or plant geography, or historical human geography. Knowing nothing except an unfocussed technique of mapping whatever loomed up in an area, they wind up with dreary and pointless description, in which whatever imagination they had originally has been lost in amassing unintelligible data. We cannot all have the same kinds of expertness, but if we are inexperienced at recognizing everything and remain content with our ignorance, all the field techniques make no

difference (C.O. Sauer to L.O. Quam, February 14, 1955).

### A Euro-American Department of Geography

Whether conscious of it or not, Sauer strove to rectify (what he perceived to be) American geography's declining image by creating, in effect, a miniature European outpost amidst the other American geography departments for which he had little or no respect. It becomes rather apparent that Sauer sincerely felt a strong intellectual kinship with European geographers, and he understandably adopted their outlook and their methods. He never states this categorically, but one cannot help but note the evidence as the Berkeley Geography Department takes shape over time (Parsons 1979, pp. 9-12; also see Speth 1981). And it was precisely in his insistence that geography adhere to Continental (and particularly Germanic) characteristics - a genetic approach, a view of geography that finds credence in ancient Greek practice (see Sauer 1925, p. 21), and especially in his emphasis on first-hand field studies (see Van Valkenburg 1951) - that led him to employ so many German geographers in the Berkeley Department (see Leighly 1978, p. 100; Kramer 1975, pp. 337-38), as well as an inordinate number of visiting foreign professors (see Parsons and Vonnegut 1983, p. 2). In 1937, responding to a letter from Guy-Harold Smith, Sauer alludes to his European enclave when he writes:

No, I cannot guess who dislikes the employment of a foreigner in your department. We have always been a semi-foreign department around here, and I think our youngsters have gotten a very valuable lift out of the presence of these people from a very different background. First there were the Germans and other continentals; in the last year we have had a string of young Englishmen, and next year for the first time we have three young professional geographers from the other side of the Pacific. . . . I can't see that we have done anybody any harm by bringing in some strange accents, and I think that insofar as we have been a little clearing house where minds from distant parts of the world have met we may have contributed somewhat to a broader understanding among geographers.

To which he promptly adds:

I haven't been doing this sort of thing because of any missionary zeal; I just like it, and I think it has worked out pretty well (C.O. Sauer to G.-H. Smith, July 28, 1937).

Yet one senses that Sauer's hiring policy went beyond the fact that he merely "like[d] it." There was also the glaring tendency to staff the Department with former Berkeley

graduate students, rather than with Ph.D.s from other American geography departments. One can only presume that Sauer preferred the training of his own graduate students over those trained elsewhere. The late Glenn T. Trewartha (1896-1984) was curious about the practice and posed the query to Sauer in 1946. It is worth quoting Sauer's response, even though one might need to read between the lines to understand his true motives:

Why don't we appoint people trained elsewhere? I suppose every department anywhere that is inbred will say that of course it has no policy in that direction. The simplest answer, perhaps, is that we have had a position open only rarely, always beginning at some junior level, and that in each specific instance it seemed that a person who had studied here and whose qualities we knew intimately was a better risk than someone about whom we knew little. That, within limits, is a natural position provided the quality of the person considered is really good. Our caution has been probably further increased by reason of the fact that due to distance we have less opportunity of getting to know the young material of other places.

Parenthetically, Sauer then adds this somewhat ambiguous paragraph:

I don't think it is the whole story however. Since you asked me to practice some introspection, I think I should say that we have not practiced an intellectual inbreeding in the fashion say that [The University of] Chicago has done. The four permanent members of the staff are certainly very different in temperament and in their interests. We respect one another, but we don't have much exchange of ideas and we are certainly oriented very differently (C.O. Sauer to G.T. Trewartha, November 21, 1946).

It is difficult and perhaps erroneous to say that Sauer was intentionally trying to build a "Euro-American" department of geography. As noted above, once he fully accepted a more characteristically European view of the discipline, the push to establish a replica department may have been unconscious. On the other hand, there is an indication that Sauer at least considered the idea early in his tenure at Berkeley. In a letter to the then-president of Berkeley, Sauer intimates his long-term intentions for the then-small, three-man Berkeley Geography Department with the possible employment of a second German geographer. In the 1929 letter Sauer first justifies an early promotion for Oscar Schmieder "to the highest rate of Associate Professor," and secondly gives his reasons for the appointment of Gottfried Pfeifer "to an assistant professorship," arguing that both men are indispensable to his needs. At the end of his letter to the

Berkeley president, Sauer makes a most interesting statement which bears citing:

Wherever undergraduate teaching, graduate instruction, and research are carried on together, I think you will find larger staffs than our own. *Perhaps we can develop a distinctive geographic school here.* We have certain advantages of location and experience, and our work is getting recognition. We petition therefore for the support, and I in particular for the relief from diffusion of interests, which will be afforded by the appointment of Dr. Pfeifer [emphasis added] (C.O. Sauer to W.W. Campbell, December 5, 1929).

Whether or not an actual "school" of geography was ever established at Berkeley is debatable (see Spencer 1976; cf. Hewes 1983). Less questionable, however, is the fact that the Berkeley Department of Geography under Sauer can be characterized as "distinctive" (e.g., Gade 1976). Moreover, it would be difficult to deny that the students' exposure to numerous "foreigners" hurt them in any way, if at all. Sauer of course recognized the advantage of familiarizing his students with "foreign" ideas and referred to the practice in a letter to Frank McVey, President of the University of Kentucky:

I think we may claim that our department at Berkeley has kept aware of the objectives of our closer professional colleagues the world over and of the interrelations of the social sciences. We have turned out a small number of Ph.D.'s, but I believe that we may say of them that they know their way around over an ample intellectual field. They have, moreover, had the opportunity of intimate association with superior students from both the Continent and the British Isles. We have had that type of intellectual exchange as no other Department of Geography (C.O. Sauer to F.L. McVey, October 13, 1936).

At bottom, it is evident Carl Sauer wanted to establish a very broadly-based department, one where graduate students would profit from as wide an exposure to viewpoints as possible. Such a perspective is indeed difficult to criticize.

### A Final Word About the Sauer Papers

The Sauer Papers are an invaluable resource. Their scope and potential use is limited only by one's creativity and imagination. In this paper I have focused only on those issues that pervade the correspondence; these are themes that one cannot help but notice, regardless of one's original purpose in reading the letters. I could not begin to list all the subjects and concerns expressed by Sauer in his professional correspondence. Letter writing was peculiarly important to Sauer. He wrote to speculate and sometimes he



wrote merely to provoke. Frequently, it was the only form of communication he had with his colleagues, often deploring the fact that his work was "better known to historians, anthropologists, biologists, agriculturists and foresters" than to geographers (C.O. Sauer to R. Hartshorne, June 22, 1946). Sauer was the sort of individual who put his personality into his correspondence, and he seldom sent anyone a "form-letter." His collected Papers are consequently akin to a diary and thus contain a treasure-trove of information. The Sauer Papers are available to all *bona fide* researchers and The Bancroft Library provides a welcome environment in which to peruse them. My sole recommendation for the prospective user is the following: *take your time*. There is far, far more in this collection than mere letters!

### NOTES

1. Biographical information for this paper was taken from numerous primary sources. With the invaluable cooperation of the Sauer family, the present writer is doing extensive research on Carl Sauer's early life and intellectual development (e.g., see Kenzer 1985a; Kenzer 1985b; Kenzer 1986). I would like to thank Elizabeth Sauer FitzSimmons for her kind assistance and for permission to examine her father's personal correspondence.
2. Leighly (1976, p. 338; 1978, p. 106) indicates that Sauer spent an entire year in Salem, but this is wrong. As well, Riess (1976, p. 64) notes that Sauer was at Salem State from December, 1913 until June, 1914. To be precise, the Sauers arrived in Salem a few days into the new year of 1914; they left on either June 18th or June 19th of that same year.
3. All citations to letters from The Sauer Papers are quoted by permission of The Bancroft Library. I thank Marie Byrne for her help in making my work at the Bancroft more profitable than it might otherwise have been.

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## Looking Before and After: British Geography in 1947

By T. W. Freeman

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UNTIL 1987<sup>†</sup> it was an American author who wrote the best account of the service given by British geographers in the 1939-45 war (L.S. Wilson, 'Some observations on war-time geography in England', *Geogr. Rev.*, vol 36/4, 1946, 597-612) and observed that 'England never possessed manpower or resources comparable with those of the United States. . . the British were closer to scraping the bottom of the barrel than we can imagine'. In civilian as well as military capacities geographers found a demand for their services, at least after the 'phony war' stage, and afterwards they found opportunities not only in the expanding universities but also in the replanning of town and countryside: indeed the 1946 paper mentioned includes an appendix by L. Dudley Stamp listing local reports on planning produced either during or immediately after the War.

The necessity of such work was widely recognised and nowhere better expressed than at the 1947 meeting of the British Association for the Advancement of Science held at Dundee, where the 1939 meeting had been hastily abandoned eight years earlier. To those who were present it stands out as a happy and hopeful gathering which owed much to a vigorous presidential address on 'Geography in war and peace' by Professor Eva G.R. Taylor (*Advancement of Science*, vol 4, 1946-48, 187-94; *Geogr. Rev.*, vol 38/1, 1948, 132-41; *Scott. Geogr. Mag.*, vol 63, 1947, 97-108), who showed that there was an immediate and pressing demand for geographical knowledge in wartime together with a challenge in the difficult years that followed. Nothing could be worse than to win the war and lose the peace and in planning, broadly conceived, applied geography had its obvious significance though, as Professor Taylor said more than once, initially there must be some pure geography to apply.

Geographers who lived through those years knew that the progress already made was at least a foundation for later development. But they were few. In Britain they had seen

that the Naval Intelligence Department at Oxford and Cambridge producing the *Handbooks* on various countries (Wilson, *op. cit.*, 603) had needed to enlist geologists, economists, historians, social anthropologists with many other natural and social scientists to supplement what Wilson kindly calls the 'high-caliber professional geographers' to produce 'one of the most outstanding and lasting contributions to the geographical literature that has resulted from the war'. A writer who was one of them could hardly resist the temptation to quote that passage.

Afterwards geographers turned naturally to the British Association to present new papers and to meet colleagues from other universities, societies, planning departments, government offices, publishing houses or other bodies whose staffs included geographers. Although the Institute of British Geographers was founded in 1933, its meetings were sparsely attended before the war, when its activities virtually ceased but were to be resumed afterwards, at first cautiously and in time with commendable vigour. The meetings of Section E (Geography) of the British Association, generally held early in September, remained attractive to university geographers through the 1950s and into the 1960s though it became clear that the numerous younger academics recruited to higher education were increasingly drawn to the more specialised meetings of the Institute of British Geographers. The same tendency was seen in other scientific subjects and was in part an expression of the rapidly developing specialisation - even compartmentalisation - of interest among academics. The meetings of the British Association provided many opportunities of interdisciplinary discussion and another valuable aspect of its work was to attract interest in science among the general public. It still finds splendid ways of doing that which are not however the concern of this essay.

Although the clear need of the immediate post-war world was to look forward, to some who by temperament or training, perhaps both, prone to think in historical terms it seemed that in British geography much had been achieved since H.J. Mackinder was appointed in 1887 at Oxford University as Reader in Geography and that information on

<sup>†</sup> In 1985 the Council of the Royal Geographical Society decided to try to record the work of geographers in World War II and the result of their enquiries appears as 'United Kingdom geographers in the Second World War: a report' by W.G.V. Balchin, *Geographical Journal*, vol. 153/2, 1987, 159-180.

this phase of the history of geography might be collected from those who had lived through these years. These people included O.J.R. Howarth, of whom more later, as well as others who had experienced Mackinder's teaching at Oxford. And notable figures who had seen the modern growth of geography included H.R. Mill (1861-1950), who had been librarian of the Royal Geographical Society and later Director of the British Rainfall Organisation, and Sir John Myres (1869-1954), a classical scholar at Oxford with a firm knowledge of the geography of the Mediterranean (he had in fact written one of the *Handbooks* mentioned earlier, on the Dodecanese) and a strong belief in the subject's educational value. In fact H.R. Mill wrote his autobiography, published in 1951, but very few geographers have done that at least until recently in very short forms.

There was clearly an opportunity, which could not recur, of assessing the recent advance of British geography. What then could be done? At this point the story returns to the Section E meeting at Dundee. One enterprise of the British Association was to give small grants to support research committees and in 1947 I asked the Section's general committee to approve the appointment of such a committee 'to collect records of the revival of Geography in the British Isles dating from the later years of the nineteenth century': this was agreed in principle though final approval had to be given at the general committee meeting of Section E on the last morning at Dundee. That was to produce a rude shock, for an intrigue had developed in the intervening days and shaken the prospective chairman, Mr. J.N.L. Baker of Oxford (1893-1971), already well known for such work on earlier periods, especially the eighteenth century. Mr. Baker was prone to occasional pessimism and the outlook seemed to be bleak: in fact the committee would probably never have been approved but for the tactful yet firm support of the president, Professor Eva Taylor. The initial members of the committee were Professor W.G. East and Dr. Arthur Geddes, with Professor D.L. Linton, then one of the secretaries of Section E. It survived, with some changes in membership, to 1951. An elder friend had suggested that possibly it was a mistake to advocate a committee at all and wiser to go forward alone. He may well have been right.

Even so, it seemed that a committee with the imprimatur of the British Association would give strength and respectability to a research enquiry and the annual grant of £5 could pay for some postage and typing. Generous moral support was given by some journals, notably the *Geographical Review* which in vol 38/3, 1948, 507 noted that 'Elsewhere in this number. . . emphasis has been laid on geographical biography. Of interest in this connection is a communication received from Mr. T.W. Freeman, then follows a men-

tion of the appointment of the committee to collect

information on the revival of British geography and on some of the persons connected therewith. . . unless such steps are taken now, while some of the pioneers are still alive, a great opportunity of recording the most important phase in the history may be lost forever. . .

The comment on biography, presumably by Dr. Wrigley, refers to the paper by Wilma B. Fairchild, 'Explorers: men and motives', vol 38/3, 414-25, based on a study of some forty recent works, which makes a clear distinction between explorers and geographers and concludes with the comment that

there have been few, if any, mature biographies of geographers. Here, then, is a challenge. What are the qualities that make the geographer, and how have they been reflected in his work? As a subject might we suggest William Morris Davis?

Fortunately there are now a number of full length biographical studies, including *The life and work of William Morris Davis* as volume 2 of the multi-volume work, *The history of the study of landforms*, 1973, by R.J. Chorley, R.P. Beckinsale and A.J. Dunn.

Now, nearly forty years later, one might question the phrase 'the most important phase' to cover the six decades with 1948 as the terminal date, but in Britain the effective recognition of geography in the universities seemed to justify such a view. It was certainly taken by some of the young geographers who were joining the staffs of universities and speaking of themselves as the 'second generation' (merging into the 'third generation') of geographers, much to the chagrin of J.N.L. Baker, who retorted that the history of geography was 'long and honourable' and from his own research and publication had all the armour to support such a view. It was he also who said 'A new geography? There is *always* a new geography'. Mention was made in the circular distributed asking for help of the geographers for whom 'there was no adequate appreciation in print. . . or even a detailed statement of their services to geography'. Among these were A.J. Herbertson (1865-1915), L.I. Rodwell Jones (1881-1947) and P.M. Roxby (1880-1947), all of whom were modern academic pioneers in the universities, and Marion I. Newbigin (1869-1934), the revered editor of the *Scottish Geographical Magazine*. The view was formed that it would be helpful to ask senior geographers to write down their recollections of the people involved in the revival from 1880 and a circular asking for such data, not for publication, was sent to senior people. Recently the archives of the Royal



Geographical Society have been given this material.

But this was not achieved without criticism, for it was said that there was 'no point in collecting gossip' and indeed to this day the editor of *Geographers* occasionally receives letters saying that it is wrong to use letters written to friends as raw material for biographical work, though in practice all who have engaged in such work know that such material is of great value and that now, in Britain, research workers on the modern history of geography (not exclusively British) eagerly visit the Royal Geographical Society to study archives that include many letters exchanged with officials of the society and other prominent figures of the past. The survival of such material is partly a matter of chance though letters sent from the society were generally duplicated on a carbon and most of the handwritten replies are legible. There is the occasional thrill, such as the finding of letters from Carl Ritter which from their tone suggest a man of unusual charm and modesty. These have now been copied and sent to the archives of Leipzig University.

Although the main purpose of the research committee was to consider individuals, it soon became clear that much was owed to the work of geographical societies and stimulus was given to the enquiry by works written on the occasion of jubilees, centenaries, and other anniversaries. Among these, for Britain, was H.R. Mill's *Record of the Royal Geographical Society*, 1930 and, turning briefly beyond Britain, J.K. Wright's *Geography in the making: the record of the American Geographical Society 1851-1951*, (New York, 1952). And with this mention should be made of the unsigned note, presumably by G.M. Wrigley, in *Geogr. Rev.*, vol 33/2, 1943, 330-31, on the jubilees of the *Annales de géographie* in 1941, briefly recorded by E. de Martonne in vol 51, 1942, 1-6, written

with a sense of profound respect and obligation. . . Under other circumstances the event would call for celebration. Here it passes with a brief but eloquent summation by Professor de Martonne of the decade-by-decade growth of the *Annales* from its happy inauguration under the great master Vidal de la Blache and his eminent associate Louis Raveneau. . . the actual volumes, over the years. . . have come to fill a seven-foot shelf, a geographical library in themselves.

In 1951 Section E of the British Association (founded in 1833) celebrated the centenary of its independent existence. Appropriately the section president in that year was O.J.R. Howarth (1877-1954), who had taken the Diploma in Geography under H.J. Mackinder in Oxford, worked as geographical assistant to the editor of the *Encyclopaedia Britannica* from 1904 to 1911 and secretary of the British As-

sociation from 1909 to 1946. With A.J. Herbertson he had edited the six volumes of the *Oxford Survey of the British Empire* which appeared in 1914 and after Herbertson's premature death in 1915 he edited and himself wrote several volumes in the 'Oxford Geographies' series. His interest in the history of geography was shown in the volume he wrote with this title in 1913 and in *The making of geography* with R.E. Dickinson in 1933. Howarth was one of the notable geographers whose career was made outside the universities. In 1951 his centenary address was particularly interesting on the long association of Section E with the Royal Geographical Society and also on the various personalities involved: as an appendix he gave nearly seventy (*Scott. Geogr. Mag.*, vol 67/3-4, 1951, 145-60; *Advmt. Sci.*, vol 8, 1951, 151-65) short biographical notes on individuals. These were to be a feature of later works, including the present author's *One Hundred Years of Geography*, 1961 and Preston James' *All Possible Worlds*, 1972.

When the 1947 inquiry began, in its own modest way, it soon became clear that hardly anyone will respond to a general appeal for data published in a geographical journal. Circulars posted to people interested are much more likely to produce a response, especially if accompanied by a personal letter. At a more detailed stage of biographical research letters to Registrars of universities asking for directly factual information, such as the dates at which a particular post was held, almost invariably result in an effective reply, generally written by a university archivist though sometimes by a member of the Registrar's staff. But all that lay ahead in 1947 and the initial fruit of effort was a number of fascinating replies from senior geographers, some of whom had recently retired, such as H.J. Fleure, H.R. Mill (who sent an advance copy of his autobiography), Sir John Myres, Arthur Geddes (there is now an archive of Geddes material in the National Library of Scotland), Hilda Ormsby, J.F. Unstead, J. Fairgrieve, John McFarlane of Aberdeen and Rudmose Brown of Sheffield. Other helpers included some former students of academic pioneers; for example, in the case of A.J. Herbertson it soon became clear that his published work, notably his scheme for natural regions with its strong climatic basis, by no means represented his whole conception of geography. He was looking forward to the production of a major work on human geography, possibly in collaboration with his wife. This had long been the general impression and was confirmed by those who attended his lectures, especially in his last years. In a few cases relatives were helpful, including Miss Hilda Newbigin who explained that her sister chose to earn her living as an editor, textbook writer and examiner rather than as a lecturer; Dr. Marion Newbigin hated lecturing, much to the regret of those who enjoyed the occasional appearances on a platform, where



her exposition was convincing and spiced with wit and humour. Mrs. Ormsby's contribution was notable not only for her fascinating insight on the work of H.J. Mackinder at the London School of Economics but also for her comment on her brother and colleague, Ll. Rodwell Jones.

In short the response was limited but valuable. Naturally H.J. Mackinder emerged as a figure of commanding stature though some regretted that in his later years his main activity lay in university administration and politics. He still fascinates writers, as may be seen in numerous papers and also in W.J. Parker's book, *Mackinder: geography as an aid to statecraft*, Oxford 1982. Not surprisingly several people wrote regretfully of the loss of A.J. Herbertson and his wife less than a month later in 1915. There were many indications of the inspiration drawn from Germany and - to a lesser extent - from France though strangely far less emphasis than a comparable enquiry would have produced at a later time on American contacts. But of influences within Britain, one constantly mentioned was Sir Patrick Geddes (1854-1932), one of the last of the Victorian polymaths, by training a biologist but eventually best known as a town planner, concerned with the whole scheme of learning and the relationship of its various aspects, as well as art, music and much more that he regarded as the 'spiritual aspect' of human existence. Among geographers scarcely anyone appeared to agree - in detail or even in general - with what he said when subjecting it to analysis, yet his general view of life had a wide appeal. In the summer schools arranged for teachers and others at Edinburgh, Oxford, Aberystwyth and elsewhere he attracted large audiences.

The enterprise which began at Dundee was a beginning and not for one moment would one claim that it was more than that. But much that was said in 1947 about possibilities, for example on biographies, has been achieved for a limited number of people, notably in Geoffrey Martin's trilogy of studies on Mark Jefferson, 1968, Ellsworth Huntington 1973 and Isaiah Bowman, 1980. Also in the United States, R.E. Dickinson spent much of his retirement producing works which emphasised the German contribution to geography including *The makers of modern geography*, 1969 and *The regional concept: the Anglo-American leaders*, 1976. In 1963 a number of J.N.L. Baker's papers were gathered together in *The history of geography* and there have been numerous studies in the various geographical journals, as well as in books composed of essays arising from various seminars and conferences. Here the provision of a full bibliography is not possible and it is only the intention to say that there is a rich and growing literature, much of it biographical, that promises well for future development, hopefully on the general development of geographical thought. This had undoubtedly led to the provision of courses on the history of

geographical thought in universities. In 1969 an enquiry sent to all the forty British and Irish university departments of geography showed that in some form the history of geography was taught almost everywhere, generally as an element in the first year course but in several cases also in the third and final year of the undergraduate course (which would be the fourth year in Scottish universities) and that some highly specialised courses were given to students as optional courses led by teachers with special interests on particular periods from Ptolemy onwards.

After the Commission on the History of geographical thought was established, through the enterprise of Professor Philippe Pinchemel of the University of Paris, at the International Geographical Congress at New Delhi in 1968, the wide range of possible enquiries was revealed at the various seminars and meetings held in later years. An early enterprise was the publication of *Geography through a century of Congresses*, 1972, issued at the Montreal congress to celebrate the centenary of the first congress at Antwerp in 1871. In 1970 a link was established with the International Union of the History and Philosophy of Science, which with the International Geographical Union has provided financial help to meet inevitable costs. After many discussions the annual journal, *Geographers: biobibliographical studies* was initiated in 1977 and has appeared every year since then, with some twenty papers in each issue from a wide range of countries. So far this is promising, but the need is to turn many of the excellent ideas expressed at meetings into some published form: at present there are hopes of inaugurating a monograph series. Regrettably much that was said, and recorded, at various meetings about possibilities of publications, bibliographies, studies of geographical societies, critical judgments of the growth and perhaps later decline of theories, national schools (at first assumed to exist everywhere though this was contested) and much more, has not so far been achieved. But if one considers the progress made since 1947, at least on the biographical approach, there is ground for encouragement. [Time was when people spoke of geography as the study of man on environment, but between man and environment there is always the idea, new or old, tried and untried, and the emphasis must remain with the thought of geographers, singly and collectively for the geographer has his own distinct approach to the living world.]



## Huntington's Cyclonic Man Theory and Ozone Hypothesis

By Kent M. McGregor  
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### Introduction, the Case for Reevaluation

ELLSWORTH HUNTINGTON was perhaps the most controversial figure in the history of American geography. Since his works were read by both the academic community and the general public, he had a considerable audience. He was known as the most eloquent spokesman for a school of thought commonly called environmental determinism. Environmental determinism dealt with the physical environment as it affects behavior and culture, and some would say, as it determines behavior and culture. It has been discarded as a workable approach to the study of geography because many speculative theories on such relationships could not be proved. Nevertheless, environmental influences do exist and have undoubtedly left their imprint on history. Huntington's theories, no matter how outdated, are of more than passing interest because of their influence on the development of geographic thought. The focus of this paper is on some of his most controversial ideas on how various attributes of climate affect culture and civilization, and specifically his ozone hypothesis.<sup>1</sup>

Although he was known as a geographer, he was perhaps better described as a student of civilization. He was fascinated by civilization, how and why it arose, advanced, stagnated, declined, and seemingly migrated. All of the dramas of civilizations were played out on an environmental stage and against a backdrop of climatic influence. Some of Huntington's most controversial ideas dealt with the effect of climate on civilization. They fall into three general categories. First, climates are not static but change and these changes have left their mark on history. Second, he held that the pattern of the variable weather caused by the cyclonic storm systems of the mid-latitudes aided the advancement of civilization in northwestern Europe. Third, he claimed that certain constituents of the atmosphere, ozone and atmospheric electricity, provided an additional stimulus to the inhabitants of the mid-latitudes.

Besides the fact that many of his ideas are not easily accepted, they illustrate another problem with Huntington's work: his topics frequently were so broad as to make verification or refutation difficult. In reviewing his critics,

however, one central fact emerges. The critics, whether severe or mild, rarely focus on the specific arguments upon which Huntington's theories were based. There is never a point-by-point critique; and typically only sweeping dismissal or outright condemnation. The more objective critics, however place the blame for the excesses of determinism accurately on poor work done by scholars who had less background than Huntington. O.H.K. Spate expressed these notions succinctly:

Huntington's determinism is avowed, and clearly based too much upon only a part of the immense complex of factors which have gone into the making of history; though it should be added that he is aware of this, it is his disciples rather than himself who threw discretion to the winds particularly the course of the cyclonic westerlies.<sup>2</sup>

If he had contented himself with detailed description of peoples, places and cultures, perhaps he would have been a more widely respected figure. Certainly he had traveled the world extensively, and had not only his own academic training, but also his vast array of personal experiences to draw upon. However he dabbled with the broad sweep of history on such a grand scale that many of his academic contemporaries were not only uncomfortable with his work but openly hostile toward it. It was not the fact that he dealt with history, but that he tried to explain history. Something even well-known historians are hesitant to do.

Another problem was that he seldom presented evidence other than that which contributed to the case in question. There was no pro and con. He stated his view of the pro and simply left the con to his critics. It was part of his technique.<sup>3</sup> Nevertheless there is a certain balance to his work if one reads enough of it. Geoffrey Martin has written the most thorough documentation of his life and thought based on Huntington's papers in the archives at Yale University. This work is vital for scholars who wish to understand the context in which Huntington developed his ideas. Martin summarized Huntington's contributions:

If he was a fellow traveler of the determinists, he was

continually weighing, assaying, and reshaping his postulates. Perhaps he assessed too many value judgments and produced too much too soon, yet he emerged with a new form of determinism, more moderate, subtle, and versatile than anything that had come before. It never did receive a name.<sup>4</sup>

Several other prominent scholars, including Rostlund, Lee and Kniffen, have valued Huntington's ideas enough to recommend more detailed study, and on a few occasions this has actually been done.<sup>5</sup> Several graduate students have thought enough of Huntington's work to explore it further. There have been four M.A. theses and one Ph.D. dissertation which dealt with Huntington.<sup>6</sup> Other works have also been published from time to time such as Fonaroff's article, "Was Huntington Right about Human Nutrition?"<sup>7</sup> The fact that all these people thought Huntington an important enough figure to probe his ideas with their own scholarly research shows a continuing, genuine interest in his work.

### Huntington on Climatic Change

John Chappell undertook a detailed reevaluation of Huntington's ideas on climatic change in Central Asia and found many had considerable substance even from the vantage point of more than fifty years.<sup>8</sup> Soviet researchers working in the modern era had basically reached the same conclusion that Huntington had fifty years before: that Central Asia had undergone desiccation in the historic period.

It is perhaps difficult to understand how much the attitudes about climatic change have changed in recent years. Most of the attention has been paid to anthropogenic perturbations such as increased carbon dioxide, decreased stratospheric ozone, or the radioactive dust of nuclear winter.<sup>9</sup> Nevertheless these concerns are based in two facts: Climate has changed and climates are delicately balanced in their current state.<sup>10</sup> There are many techniques used to reconstruct what past climates have been. Huntington himself was a pioneer in the use of tree rings to reconstruct such changes.<sup>11</sup> We now know that there have been climatic changes over the past 20,000 years. In addition, some modern global atmospheric models have revealed how fairly minute changes of one factor or another can cause significant changes in temperature or precipitation patterns in various parts of the world. Witness the recent concern with desertification in the Sahel and elsewhere. Thus Huntington's notions on climatic change seem to be vindicated.

### The Cyclonic Man

One of Huntington's most intriguing theories is that of the

cyclonic man. His principal thesis is that cool temperatures and variable weather promote the highest civilizations.<sup>12</sup> Huntington held that the physical environment influences the location and level of civilization. Consequently each climatic zone has its own maximum level of development. Civilization, after beginning in the subtropics, slowly progressed to higher forms there. However the progress was not constant but accelerated during periods when climatic changes brought cooler temperatures and allowed more cyclonic storms to penetrate farther south into the Mediterranean region. As technological capacity increased with the passage of time, societies could better endure and profit from these cooler but more "stimulating and productive" climates of Northwest Europe. Optimal temperature and humidity helped to explain the northward shift of civilization from locations in the Mediterranean in ancient times to northwestern Europe in the late Nineteenth Century.

For Huntington the highest civilizations required an additional climatic factor beyond optimal temperature and humidity. Maximum "climatic efficiency" occurred when these factors were coupled with pronounced seasonal and even daily changes of weather. Such variable weather is found primarily in the mid-latitude cyclonic zones of the world, including western Europe, eastern North America, eastern China, and Japan where mid-latitude cyclonic storm systems are active throughout the year. After the storm passes, the weather typically clears for a few days under the influence of high pressure before a new cyclone arrives. The irregular but perpetual succession of cyclonic storms across the mid-latitudes sustain a pattern of consistently variable weather. The end product of high climatic efficiency was high civilization based on the premise that frequent cycles of weather were "among the chief stimulus to invention, thrift, and foresight."<sup>13</sup>

### The Ozone Hypothesis

Later Huntington advanced his ozone hypothesis - an idea closely related to the cyclonic man theory. It was an extension of the concept to include the allegedly stimulating effects of atmospheric ozone brought to the surface by cyclonic storms. Today ozone is regarded as a harmful atmospheric pollutant, so it is difficult to imagine it as something desirable. But in Huntington's time, air pollution of this sort was unknown, and ozone had the connotation of especially invigorating air.<sup>14</sup> This oxygen isotope is a more powerful oxidizer than oxygen itself and also is an active catalytic agent. Consequently, Huntington reasoned, breathing extremely low concentrations might have far-reaching physiological impacts. When he discovered that



the cyclones of the mid-latitudes carried high natural levels of ozone to the surface, he hypothesized that atmospheric ozone operating with other weather variables helped to make the cyclonic zones more stimulating places in which to live.<sup>15</sup> In the end, ozone gave his theories a concrete climatic-physiologic link.

During the passage of a cyclonic storm, many atmospheric variables change - temperature, humidity, pressure, and ozone to name a few. The core of the cyclonic man theory is that the frequent systematic change of so many attributes provided small pulses of stimuli which helped push the cyclonic civilization along. He summarized these ideas as follows:

The center of civilization during the past few thousand years has gradually shifted not only from warmer to cooler climates, but from those with few cyclonic storms and presumably with little of the stimulating effect of atmospheric ozone and electricity to those with a maximum of these stimulating conditions.<sup>16</sup>

### Ozone History and Effects

His ideas, at the time, were the latest in a long history of speculation on the power of weather to affect life. Let us digress briefly and review some others. The belief in the power of weather and other attributes of the atmosphere to affect life on earth has been an integral part of human beliefs throughout history. In fourth century B.C. Greece, Hippocrates' treatise "On Airs, Waters, and Places," traced the influence of the prevailing winds and their origins in determining the character of the people in a given place. An almost equally ancient expression is the Latin word "malaria". Webster's dictionary (1967) gives an archaic definition as "air infected with a noxious substance capable of causing disease." In more recent times, similar beliefs have left their imprint on some geographical place names, e.g. "Buenos Aires."

In the historical context of such ideas, the word "ozone" has been used to connote especially invigorating air. In 1735, before it was isolated chemically, ozone was defined (Webster's, 1966) as pure and refreshing air as in "the fresh, crisp ozone of morning." The belief in large amounts of ozone at the seashore and near waterfalls is another popular myth of a bygone era. Huntington was one of a few academic geographers whose works were read by a general audience, so perhaps he was only adding to the popular perception of ozone as especially invigorating air. It is possible Huntington, like others of his generation, believed ozone was beneficial. So when he discovered that the highest

ozone concentrations occur with cyclones, his cyclonic man theory had additional supporting evidence.

Some scientists also believe that ozone has special qualities. The English climatologist, H.H. Lamb, said "The ozone in the Earth's atmosphere is important to life. It is itself highly poisonous and dangerous to human beings in concentrations exceeding 0.1 ppm, although very small amounts of it - i.e., in still greater dilutions are stimulating and beneficial."<sup>17</sup> "Stimulating and beneficial" - these are essentially Huntington's own words. Another scientist, Sulman, called a concentration of 0.1 ppm "normal and beneficial."<sup>18</sup>

In evaluating the literature regarding ozone and cyclonic storms, it appears that Huntington's meteorology is substantially correct.<sup>19</sup> The highest natural concentrations of ozone do indeed occur with cyclones. The low pressure trough aloft, which accompanies the cyclones, helps to funnel minute amounts of stratospheric ozone toward the surface.

The physiological evaluation is less conclusive. Ozone is definitely harmful in high concentrations such as occur in the polluted atmosphere of cities.<sup>20</sup> However these are not the concentrations to which Huntington referred. Nevertheless, there is little real evidence that breathing these lower, natural concentrations, has a significant effect on human physiology. The best that can be said is that ozone is sometimes used in air conditioning systems to eliminate the "dead air" feeling.

### Conclusions

The ability of weather to affect human societies has been the subject of many ideas that range from scientifically based theories to idle speculations. Ellsworth Huntington's ideas were perhaps the most extensive, and for their time, the most thoroughly documented. After undertaking a critical review of Huntington's climatology, one can conclude that Huntington comes out well on the subject of climatic change. Climates have changed in historic times, and these changes have undoubtedly left their imprint on history. His concept of the cyclonic man and ozone hypothesis is intriguing, even bold speculation, but is difficult to validate. The ozone hypothesis is less conclusive. Certainly, Huntington's meteorology is correct in that the cyclonic storms of the mid-latitudes do, in fact, carry the highest naturally occurring concentrations of ozone to the earth's surface. However, the postulated effects on human physiology were probably overstated. In fairness to Huntington, he never claimed that the cyclonic man theory was based primarily on the relationship between cyclones and ozone. He only used the relationship as additional supporting evidence years

after the original cyclonic man theory was developed. He understood, full well, that such speculation was a venture into the unknown. His ideas, at the time, were the latest in a long historical process speculating on the influence of atmospheric constituents, including ozone, which continues to this day. The ghost of Huntington is still very much with us.

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## Recent Literature on the History of Geography

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**M**OST BIBLIOGRAPHIES are qualified with a number of caveats and this listing is no exception. First, a brief account of its evolution will set the background for its general framework. This listing originated with citations that I collected, at first casually, as part of my work in compiling the *Bibliography of Cartography*, since I assumed the position of Bibliographer in the Geography and Map Division, Library of Congress, in February 1982. In the course of my work, I review over 200 journals, primarily American and European cartography, geography, and library periodicals. My primary purpose is to select, list, and analyze references pertaining to current map-making activities and the history of cartography. During this process, I noted, incidentally, articles and books that pertained to the history of geography and only marginally to the history of cartography. About a year ago, I suggested to Geoffrey Martin that I was willing to contribute, what I considered to be a miscellaneous group of citations, to a listing of recent literature on the history of geography for the newsletter. I assumed that he would be the one person who would be best able to compile a comprehensive listing, but he returned with the suggestion that I compile such a listing. So here it is!

In defining the coverage of this listing I have limited the selections to articles and monographs published since 1980. The topics covered include the development of geographic thought and methodology in the context of the discipline in general and within individual countries; the history of professional societies and their publications; the history of geographical teaching including the development of geographic textbooks and geography departments in academic institutions; and biographies of individual geographers as well as analyses of their works. I have not included any references to articles in this newsletter or *Geographers: Biobibliographical Studies* on the assumption that these publications are familiar to the present readers.

This listing does not purport to be comprehensive. I have not made extensive bibliographical researches of all relevant databases or examined footnotes of the present articles for additional references. The listing includes only those

references that I have encountered in the course of my normal bibliographic work. Although the Library receives a large number of geographic and cartographic publications, it does not receive all. In addition, many foreign-language publications are often delayed in reaching the Library and are not always assigned the highest priority in terms of processing and cataloging. Nevertheless, I hope that this listing will be useful. I welcome suggestions concerning changes in coverage and format as well as contributions or assistance in compiling future listings of this nature.

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## European Geographers in Nineteenth-Century America

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NUMEROUS European geographers and naturalists visited the United States in the nineteenth century, especially after steam travel made the ocean crossing faster and safer, but most of the visitors intended only a brief stay. Some, like Alexander von Humboldt, concentrated their attention on other parts of the western hemisphere and spent relatively little time in the United States - in Humboldt's case, only seven weeks out of five years in the Americas.<sup>1</sup> Others, such as Elisée Reclus and Ferdinand von Richthofen, came with no particular plan in mind and stayed on for extended periods of time. Their American experiences were invaluable in launching their careers as geographers.<sup>2</sup> Friedrich Ratzel, Johann Georg Kohl, and Julius Fröbel were other geographers whose American experiences were substantial and rewarding.<sup>3</sup> In this paper, however, I want to concentrate on some European geographers whose stays were much longer, resulting in most cases in a change of career. It was difficult for European academics to find positions in American colleges and universities before the renovation and expansion of disciplines and universities began in the 1870s and 1880s.

Ernst Kapp (1808-96), a German geographer who has been called "the only great, authentic student and disciple of Carl Ritter," taught in the *Gymnasium* at Minden in Westphalia from 1830 to 1849 and published an important geographical work, *Philosophische oder vergleichende allgemeine Erdkunde* (2 vols., 1845-46). In 1849, after imprisonment for publishing a seditious political tract, he resigned his teaching position and emigrated to Texas with his wife and five children. He spent the next sixteen years in Sisterdale, Texas, engaged first in farming and then in the operation of a "hydropathic institute," where patients came to bathe and to engage in gymnastic exercises. In 1865 he went back to Germany for what was supposed to be a short visit, but he remained there until his death more than thirty years later. He then revised his great opus, which was published in 1869 under the title *Vergleichende allgemeine Erdkunde in wissenschaftlicher Darstellung*, and also wrote other geographical and scientific works.<sup>4</sup>

Another German geographer who left his homeland for

the New World at about the same time as Kapp was Hans Christian Dreis (1809-72), who has been called "the first German *privatdozent* of Geography." He taught geography in the University of Kiel from 1848 to 1850, but he never went through the "habilitation" process that is necessary in Germany for those seeking permanent university appointments. If the Philosophical Faculty had bestowed a chair on Dreis in 1848 it would have been the second German chair of geography, after the one in Berlin. The proliferation of chairs was still at least a quarter of a century away. For unexplained reasons, Dreis abruptly resigned from Kiel University in 1850 and emigrated to Davenport, Iowa, where he taught briefly before becoming a brewer.<sup>5</sup>

Best known of the European émigré-geographers of that era, and the only one who secured an academic position and left a notable mark, was Arnold Guyot (1807-84). Guyot was a Swiss geographer who took his doctorate in geography under Ritter at the University of Berlin in 1835 and taught in the Academy (later University) of Neuchâtel in Switzerland before it was closed during the political troubles in 1848. Then, on invitation from his friend and former colleague Louis Agassiz, Guyot emigrated to the United States. Agassiz was not able to make a place for him at Harvard University, but in 1854 Guyot was appointed Professor of Geology and Physical Geography at the College of New Jersey (renamed Princeton University in 1896). At first it was a half-time appointment, but it was soon transformed into a full-time professorship (at \$1500 a year) when "a gentleman of distinguished liberality, in Newark [New Jersey] . . . signified his purpose to make permanent provision for the Professorship held by Prof. Guyot. . . ." When Guyot joined the College, the entire teaching staff consisted of eight professors and five tutors. Although he left students who carried on his work, such as William Libbey and William Berryman Scott, their attention was directed mostly to strengthening the field of geology or to extracurricular matters (Libbey was a six-term president of the National Rifle Association!), and geography withered on the vine.<sup>6</sup>

Another Swiss academic who came to America was Albert Schaffter (1823-97), professor of Romance philology in



the University of Bern and founder-president of the Bern Geographical Society, who emigrated to Tennessee in 1875. Schaffter had been trained as a theologian, and when he went to Tennessee he turned his back on geography and Romance philology and devoted himself to missionary work. He became the director of Hoffmann Hall, a mission training school for Blacks in Nashville. He maintained contact with friends in Bern but did not contribute to the further growth of the Geographical Society.<sup>7</sup>

These are a few examples of European geographers who were more than mere sojourners in the United States in the nineteenth century. Perhaps readers of this *Newsletter* can think of many more. These geographers are of interest because they show what happened to professionals who migrated to a country that was still essentially in a pre-professional state. How differently American geography might have turned out if our universities had been in a position to utilize their talents to the utmost.

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# Carl O. Sauer

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